查询SY100E131供应商

FEATURES

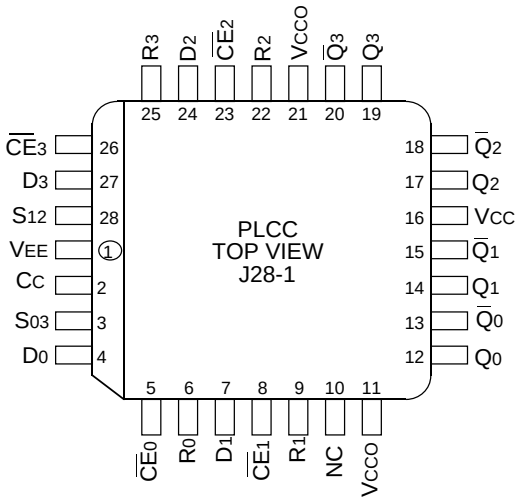
- **1100MHz min. toggle frequency**
- **Extended 100E V_{EE} range of –4.2V to –5.5V**
- **Differential output**
- **Individual and common clocks**
- **Indivldual asynchronous reset**
- **Paired asynchronous sets**
- **Fully compatible with Industry standard 10KH, 100K ECL levels**
- **Internal 75KΩ input pulldown resistors**
- **Fully compatible with Motorola MC10E/100E131**
- **Available in 28-pin PLCC package**

DESCRIPTION

The SY10/100E131 are high-speed quad master slave D-type flip-flops with differential outputs designed for use in new, high-performance ECL systems. The flip-flops may be individually clocked by holding C_C (Common Clock) at a logic LOW and then using the four individual $\overline{CE}$ (Clock Enable $\overline{CE}_0$–$\overline{CE}_3$) inputs to accomplish such clocking. Alternatively, all four flip-flops can be clocked in common by holding the $\overline{CE}$ inputs LOW and then using C_C to clock the data. In the common clock mode, the $\overline{CE}$ input acts as a control that passes the C_C signal to the flip-flop. Data is clocked into the flip-flop on the rising edge of the output of the logical OR operation between $\overline{CE}$ and C_C (data enters the master when both C_C and $\overline{CE}$ are LOW and data transfers to the slave when either $\overline{CE}$ or C_C, or both, go HIGH).

Asynchronous set and reset controls are provided. The reset controls are individual and the set controls are pairwise.

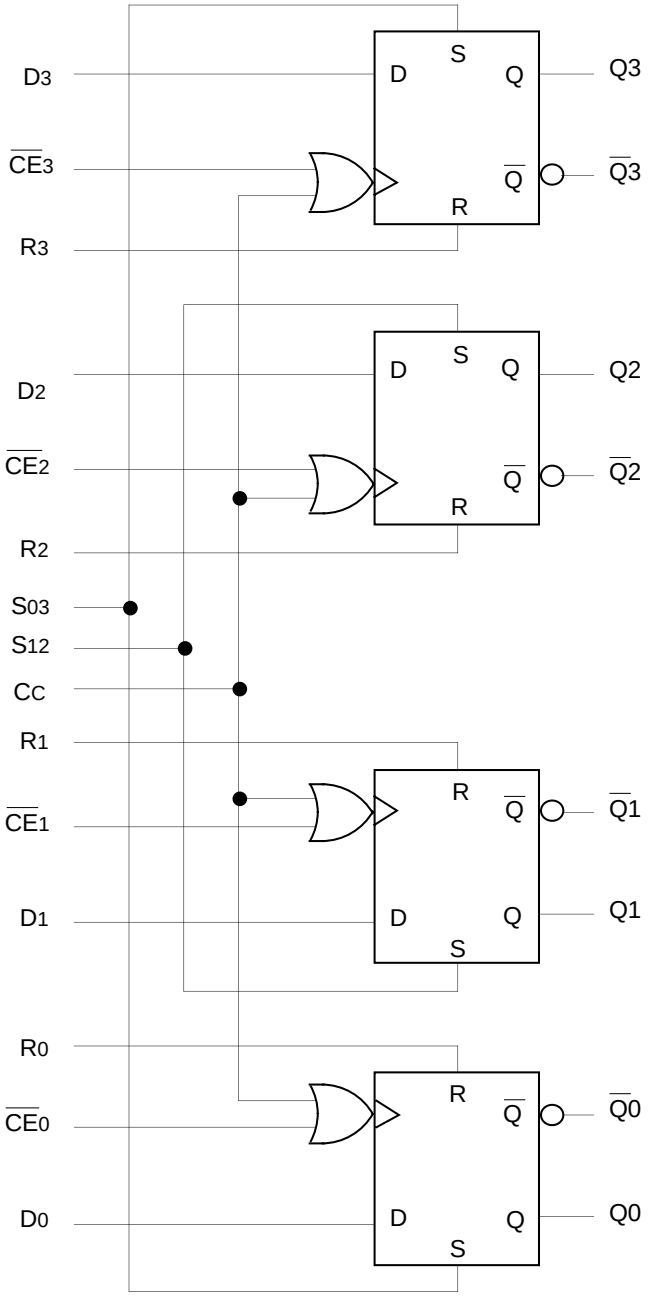
PIN CONFIGURATION



PIN NAMES

Pin	Function
D_0-D_3	Data Inputs
$\overline{CE}_0$-$\overline{CE}_3$	Clock Enables (Individual)
R_0-R_3	Resets
C_C	Common Clock
S_{03}, S_{12}	Sets (paired)
Q_0-Q_3	True Outputs
$\overline{Q}_0$-$\overline{Q}_3$	Inverting Outputs
V_{CCO}	V_{CC} to Output

BLOCK DIAGRAM



TRUTH TABLE

Pin	State	Mode
C_C	L	Individual clocking with $\overline{CE}_n$
$\overline{CE}$	L	Common clocking with C_C

DC ELECTRICAL CHARACTERISTICS

V_{EE} = V_{EE}(Min.) to V_{EE}(Max.); V_{CC} = V_{CCO} = GND

Symbol	Parameter	T_A = –40°C			T_A = 0°C			T_A = +25°C			T_A = +85°C			Unit
		Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	
I_{IH}	Input HIGH Current													µA
	C_C	—	—	350	—	—	350	—	—	350	—	—	350	
	S	—	—	450	—	—	450	—	—	450	—	—	450	
	R	—	—	300	—	—	300	—	—	300	—	—	300	
	$\overline{CE}$	—	—	300	—	—	300	—	—	300	—	—	300	
	D	—	—	150	—	—	150	—	—	150	—	—	150	
I_{EE}	Power Supply Current													mA
	10E	—	58	70	—	58	70	—	58	70	—	58	70	
	100E	—	58	70	—	58	70	—	58	70	—	67	81	

AC ELECTRICAL CHARACTERISTICS

V_{EE} = V_{EE}(Min.) to V_{EE}(Max.); V_{CC} = V_{CCO} = GND

Symbol	Parameter	T_A = –40°C			T_A = 0°C			T_A = +25°C			T_A = +85°C			Unit
		Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	
f_{MAX}	Max. Toggle Frequency	1100	1400	—	1100	1400	—	1100	1400	—	1100	1400	—	MHz
t_{PLH} t_{PHL}	Propagation Delay to Output CE	310	600	750	360	500	700	360	500	700	360	500	700	ps
	C_C	275	600	725	325	500	675	325	500	675	325	500	675	
	R	300	625	775	350	550	725	350	550	725	350	550	725	
	S	300	550	775	350	550	725	350	550	725	350	550	725	
t_S	Set-up Time, D[2]	200	20	—	150	20	—	150	20	—	150	20	—	ps
t_H	Hold Time, D[2]	225	–20	—	175	–20	—	175	–20	—	175	–20	—	ps
t_{RR}	Reset Recovery Time	450	150	—	400	150	—	400	150	—	400	150	—	ps
t_{PW}	Minimum Pulse Width													ps
	Clk	400	—	—	400	—	—	400	—	—	400	—	—	
	R, S	400	—	—	400	—	—	400	—	—	400	—	—	
t_{skew}	Within-Device Skew[1]	—	60	—	—	60	—	—	60	—	—	60	—	ps
t_r t_f	Rise/Fall Time 20% to 80%	275	460	725	300	480	675	300	480	675	300	480	675	ps

NOTES:

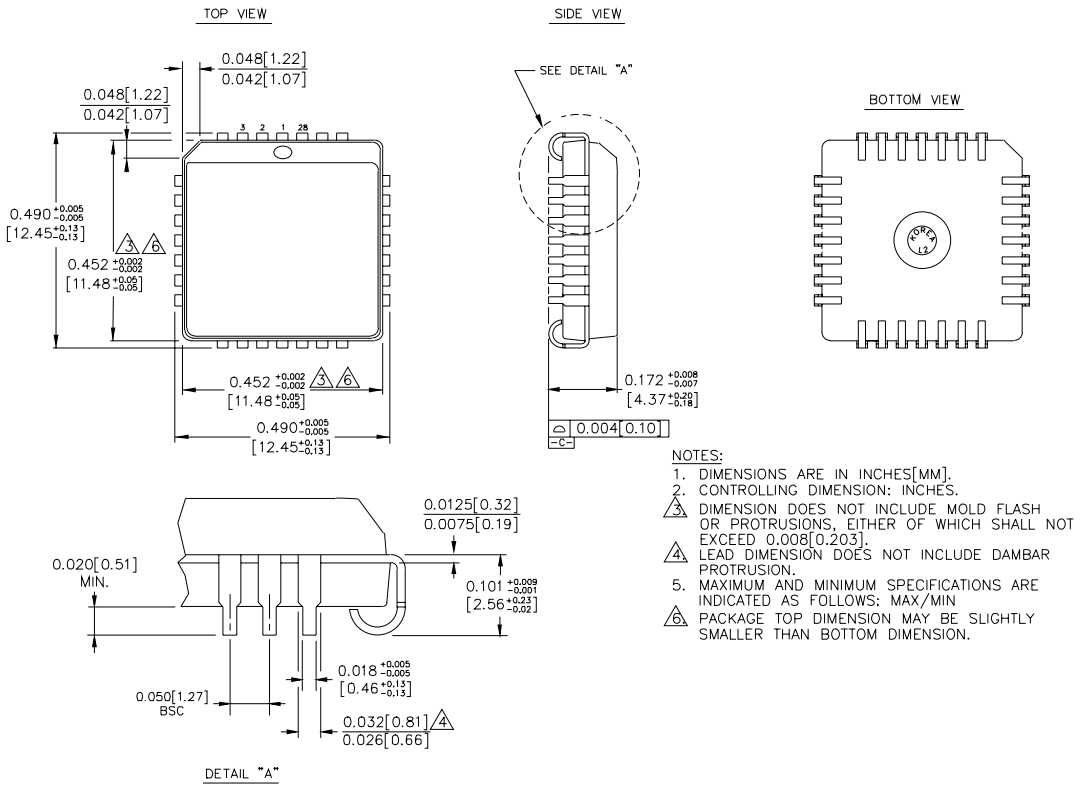
1. Within-device skew is defined as identical transitions on similar paths through a device.
2. Set-up/hold times guaranteed for both C_C and $\overline{CE}$.

PRODUCT ORDERING CODE

Ordering Code	Package Type	Operating Range
SY10E131JC	J28-1	Commercial
SY10E131JCTR	J28-1	Commercial
SY100E131JC	J28-1	Commercial
SY100E131JCTR	J28-1	Commercial

Ordering Code	Package Type	Operating Range
SY10E131JI	J28-1	Industrial
SY10E131JITR	J28-1	Industrial
SY100E131JI	J28-1	Industrial
SY100E131JITR	J28-1	Industrial

28 LEAD PLCC (J28-1)



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